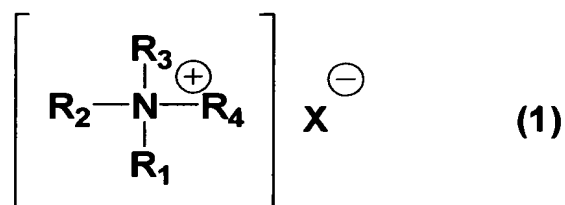


CLAIMS

1. A catalyst composition for producing a rigid polyurethane foam and/or an isocyanurate-modified rigid polyurethane foam comprising at least the following amine compounds of (A) and (B):

(A) a quaternary ammonium salt represented by the following general formula (1):



wherein each of R₁ to R₃ represents a saturated or unsaturated hydrocarbon group having 1 to 12 carbon atoms, R₄ represents an alkyl group or an aromatic hydrocarbon group having 1 to 18 carbon atoms, and X represents an organic acid group having an acid dissociation constant (pK_a) of 4.8 or less, provided that any two of R₁ to R₃ may together form a hetero ring through a carbon atom, an oxygen atom, or a nitrogen atom;

(B) one or two or more hydrophobic amine compounds selected from the group consisting of N-methyldicyclohexylamine, N,N-dimethylbenzylamine, N,N-dimethyloctylamine, N,N-dimethylnonylamine, N,N-dimethyldecylamine, N,N-dimethylundecylamine, N,N-dimethyldodecylamine, N,N-dimethyltridecylamine, N,N-dimethyltetradecylamine, N,N-dimethylpentadecylamine, N,N-dimethylhexadecylamine, N,N-dimethylheptadecylamine, N,N-dimethyloctadecylamine, N-methyldioctylamine, N-methyldinonylamine, N-methyldidecylamine, N-methyldiundecylamine, N-methyldidodecylamine, N-

methylditridecylamine, N-methylditetradecylamine, N-methyldipentadecylamine, N-methyldihexadecylamine, N-methyldiheptadecylamine, and N-methyldioctadecylamine.

2. The catalyst composition according to claim 1, wherein the organic acid constituting the quaternary ammonium salt represented by the general formula (1) is formic acid and/or acetic acid.

3. The catalyst composition according to claim 1, wherein the quaternary ammonium salt represented by the general formula (1) is one or two or more salts selected from the group consisting of tetramethylammonium acetate, tetramethylammonium formate, tetraethylammonium acetate, tetraethylammonium formate, tetrapropylammonium acetate, tetrapropylammonium formate, tetrabutylammonium acetate, tetrabutylammonium formate, methyltriethylammonium acetate, methyltriethylammonium formate, methyltripropylammonium acetate, methyltripropylammonium formate, methyltributylammonium acetate, methyltributylammonium formate, trimethyldodecylammonium formate, and trimethyldodecylammonium acetate quaternary ammonium salts.

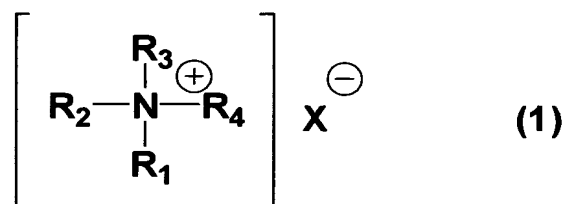
4. The catalyst composition according to any one of claims 1 to 3, which further contains the following amine compound of (C):

(C) one or two or more heterocyclic tertiary amine compounds selected from the group consisting of 1-isobutyl-2-methylimidazole, 1-methylimidazole, 1,2-dimethylimidazole, 1-(2-hydroxyethyl)-2-methylimidazole, 1-(2-hydroxypropyl)-2-methylimidazole, 1-(2-hydroxyethyl) imidazole, N-methyl-N'-(2-

hydroxyethyl)piperazine, and N-(2-hydroxyethyl)morpholine.

5. A catalyst composition for producing a rigid polyurethane foam and/or an isocyanurate-modified rigid polyurethane foam comprising at least the following amine compounds of (A) and (C):

(A) a quaternary ammonium salt represented by the following general formula (1):



wherein each of R_1 to R_3 represents a saturated or unsaturated hydrocarbon group having 1 to 12 carbon atoms, R_4 represents an alkyl group or an aromatic hydrocarbon group having 1 to 18 carbon atoms, and X represents an organic acid group having an acid dissociation constant (pKa) of 4.8 or less, provided that any two of R_1 to R_3 may together form a hetero ring through a carbon atom, an oxygen atom, or a nitrogen atom;

(C) one or two or more heterocyclic tertiary amine compounds selected from the group consisting of 1-isobutyl-2-methylimidazole, 1-methylimidazole, 1,2-dimethylimidazole, 1-(2-hydroxyethyl)-2-methylimidazole, 1-(2-hydroxypropyl)-2-methylimidazole, 1-(2-hydroxyethyl)imidazole, N-methyl-N'-(2-hydroxyethyl)piperazine, and N-(2-hydroxyethyl)morpholine.

6. The catalyst composition according to claim 5, wherein the organic acid constituting the quaternary ammonium salt represented by the general formula (1) is formic acid and/or acetic acid.

7. The catalyst composition according to claim 5 or 6, wherein the quaternary ammonium salt represented by the general formula (1) is one or two or more salts selected from the group consisting of tetramethylammonium acetate, tetramethylammonium formate, tetraethylammonium acetate, tetraethylammonium formate, tetrapropylammonium acetate, tetrapropylammonium formate, tetrabutylammonium acetate, tetrabutylammonium formate, methyltriethylammonium acetate, methyltriethylammonium formate, methyltripropylammonium acetate, methyltripropylammonium formate, methyltributylammonium acetate, methyltributylammonium formate, trimethyldodecylammonium formate, and trimethyldodecylammonium acetate quaternary ammonium salts.

8. A raw material-blended composition for producing a rigid polyurethane foam and/or an isocyanurate-modified rigid polyurethane foam comprising a polyol component, water, and the catalyst composition according to any one of claims 1 to 7.

9. The raw material-blended composition according to claim 8, which further contains one or two or more compounds selected from the group consisting of 1,1,1,3,3-pentafluorobutane, 1,1,1,3,3-pentafluoropropane, 1,1,1,2-tetrafluoroethane, 1,1,1,2,3,3,3-heptafluoropropane, 1,1,1,2,3,3,3-hexafluoropropane, 1,1,1,4,4,4-hexafluorobutane, propane, butane, pentane, cyclopentane, and hexane, as a blowing agent.

10. The raw material-blended composition according to claim 8 or 9, which contains an aromatic polyester polyol as the polyol component.

11. A process for producing a rigid polyurethane foam and/or an isocyanurate-modified rigid polyurethane foam, which comprises mixing a polyisocyanate with the raw material-blended composition according to any one of claims 8 to 10, and reacting them.